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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/779,320	02/12/2004	Vijay Pillai	480062.768	5245

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SEED INTELLECTUAL PROPERTY LAW GROUP PLLC  
701 FIFTH AVENUE, SUITE 5400  
SEATTLE, WA 98104-7092

EXAMINER
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BROWN, VERNAL U

ART UNIT	PAPER NUMBER
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2612

MAIL DATE	DELIVERY MODE
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01/25/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/779,320

Applicant(s)

PILLAI ET AL.

Examiner

Vernal U. Brown

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-15, 17-22 and 28-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15, 17-22 and 28-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) ✓
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-848)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08) ✓  
Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

This action is responsive to communication filed on November 13, 2007.

#### ***Response to Amendment***

The examiner has acknowledged the amendment of claims 1, 12, 18, 19, 21.

#### ***Response to Arguments***

Applicant's arguments on pages 9-12 with respect to the limitation of ending the time interval prematurely if none of the tag responds have been considered but are moot in view of the new ground(s) of rejection.

Regarding applicant argument on page 12 regarding reducing power level if the number of tag is more than a particular number, Kenny et al. teaches varying the range of the interrogating signal by varying the power of the interrogating signal (paragraph 021) and reducing the range automatically reduce the number of tags responding to the interrogating signal.

Applicant's arguments, with respect to rejection of claims 1-27 under *35 USC § 112* have been fully considered and are persuasive. The rejection of claims 1-27 under *35 USC § 112* has been withdrawn.

Regarding applicant argument regarding the limitation of different frequencies in the same frequency band, Kenny et al. teaches varying the range of the LF carrier signal by adjusting the power and frequency of the LF carrier signal used to identify objects in a particular zone and teaches the range of the LF signal is greater than 30kHz and less than 15MHz (paragraph 021). Kenny therefore teaches the first and second frequencies are in

the same frequency band because only LF carrier signal is used to identify objects in zone

1.

*Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12 and 16-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kenny et al. US Patent Application 20040036595 in view of Schuermann European Patent Application Publication 0689161 and further in view of Tuttle et al. US Patent 5613228.

Regarding claims 1-2, and 12, Kenny et al. teaches sending power for a time interval to a tag at first frequency in the low frequency range (paragraph 0018) and transmitting a second signal at second frequency in the high frequency range when a response is not received from the tag after the transmission of the low frequency signal (paragraph 0033). The transmitted signal to the tag contains energy (paragraph 0019) and a first and second power ( $P_j$  and  $P_{j+1}$ ) is inherently associated with the first and second signal respectively. The LF signal is transmitted before the HF signal and is therefore transmitted at different time interval because they are not transmitted at the same time.

Kenny et al. also teaches varying the range of the LF carrier signal by adjusting the power and frequency of the LF carrier signal used to identify objects in a particular zone and teaches the range of the LF signal is greater than 30kHz and less than 15MHz (paragraph 021). Kenny therefore teaches the first and second frequencies are in the same frequency band because only LF carrier signal is used to identify objects in zone 1.

Kenny et al. teaches the time between sending power ( $P_j$  and  $P_{j+1}$ ) is less than a time in which the tag loses its function because the transmission of the response signal from the tag provides evidenced that the function of the tag is not loss due to lack of power (paragraph 0018-0019). Kenny et al. is however silent on teaching the power is transmitted for different time duration. Schuermann in an art related identification system invention varying the read range of a transponder by varying the duration of the power level of the interrogation signal (col. 7 lines 1-7). Kenny and Schuermann are also silent on teaching ending an interval prematurely if none of the tag responds. Tuttle et al. in an analogous art teaches ending a signal prematurely by terminating the transmission of a signal at a particular power level when no response is received and transmitting a signal at a higher power level (figure 1, col. 2 lines 28-54)

It would have been obvious to one of ordinary skill in the art to modify the RFID identification system of Kenny et al. as disclosed by Schuermann in view of Tuttle et al. because varying the duration of the power level of the interrogation signal provides an alternative means of varying reading range and provides a means for limiting the power use in communication between an interrogator and RFID tags.

Regarding claim 3, Kenny et al. teaches the signals are transmitted in order for the tag to identify themselves (paragraph 0033-0034). The sending of the signal is therefore stopped after no further tag identifies themselves.

Regarding claim 4, Kenny et al. teaches transmitting signal at different range and the power of the signal varied with the range (paragraph 0021).

Regarding claims 5, 9-11, Kenny et al. teaches transmitting the interrogation signal at a first frequency and a second frequency and the range of the interrogation signal is varied with the power and/or frequency (paragraph 0021) but is not explicit on teaching reducing the power  $P_j$  when the time  $t_j$  is too short and the power is a function of time. Schuermann in an art related identification system invention varying the read range of a transponder by varying the duration of the power level of the interrogation signal (abstract).

It would have been obvious to one of ordinary skill in the art to modify the RFID identification system of Kenny et al. as disclosed by Schuermann because varying the duration of the power level of the interrogation signal provides an alternative means of varying reading range.

Regarding claims 6-8, Claims 6-8 represents an optimization of the claimed invention of changing the time the interrogation signal is broadcast at a certain frequency. When the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

It would have been obvious to one of ordinary skill in the art to optimize the time of the transmitted interrogation signal as claimed because when the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

Regarding claim 16, Kenny et al. teaches transmitting a high frequency signal to the tags when no response is received from the tag (paragraph 0033).

Regarding claim 17, Kenny et al. teaches transmitting a high frequency signal to the tags when no response is received from the tag (paragraph 0033) after first sending a LF signal at a first power (paragraph 0018). The time in which the interrogator is expected to receive the response from the tag is considered the protocol time limit.

Regarding claims 18-22, Kenny et al. teaches sending power for a time interval to a tag at first frequency in the low frequency range (paragraph 0018) and transmitting a second signal at second frequency in the high frequency range when a response is not received from the tag after the transmission of the low frequency signal (paragraph 0033). The transmitted signal to the tag contains energy (paragraph 0019) and a first and second power ( $P_j$  and  $P_{j+1}$ ) is inherently associated with the first and second signal respectively. Kenny et al. teaches an antenna coupled to the base station for transmitting the signal to the tags (paragraph 0020). Kenny et al. also teaches varying the range of the LF carrier signal by adjusting the power and frequency of the LF carrier signal used to identify objects in a particular zone and teaches the range of the LF signal is greater than 30kHz

and less than 15MHz (paragraph 021). Kenny therefore teaches the first and second frequencies are in the same frequency band because only LF carrier signal is used to identify objects in zone 1. Kenny et al. is however silent on teaching the power is transmitted for different time duration. Schuermann in an art related identification system invention varying the read range of a transponder by varying the duration of the power level of the interrogation signal (col. 7 lines 1-7). Kenny and Schuermann are also silent on teaching ending an interval prematurely if none of the tag responds. Tuttle et al. in an analogous art teaches ending a signal prematurely by terminating the transmission of a signal at a particular power level when no response is received and transmitting a signal at a higher power level (figure 1, col. 2 lines 28-54).

It would have been obvious to one of ordinary skill in the art to modify the RFID identification system of Kenny et al. as disclosed by Schuermann because varying the duration of the power level of the interrogation signal provides an alternative means of varying reading range and provides a means for limiting the power use in communication between an interrogator and RFID tags.

Regarding claims 28-32, Kenny et al. teaches varying the range of the LF carrier signal by adjusting the power and frequency of the LF carrier signal used to identify objects in a particular zone and teaches the range of the LF signal is greater than 30kHz and less than 15MHz (paragraph 021). Kenny therefore teaches the first and second frequencies are in the same frequency band because only LF carrier signal is used to identify objects in zone 1.



Claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kenny et al. US Patent Application 20040036595 in view of Schuermann European Patent Application Publication 0689161 in view of Tuttle et al. US Patent 5613228 and further in view of Turner European Patent Application Publication 0899677.

Regarding claims 13-14, Kenny et al. teaches transmitting an interrogation signal and the interrogator receiving a response within a time period (paragraph 0018) but is silent on teaching the response time is less than the reset and the power down time. Turner in an art related identification system teaches the tag response cycle is less than the reset and the power down time (abstract).

It would have been obvious to one of ordinary skill in the art to modify the tracking system of Kenny in view of Schuerman as disclosed by Turner because this enables the tag to transmit its response when powered by the interrogating signal.

Regarding claims 15, Kenny et al. teaches transmitting an interrogation signal and the interrogator receiving a response within a time period (paragraph 0018) but is silent on teaching the response time is less than 20 milliseconds. Turner in an art related identification system teaches the tag response cycle is less than the reset and the power down time (abstract). When the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

It would have been obvious to one of ordinary skill in the art to optimize the response time in Kenny et al. in view of Schuerman as disclosed by Turner because when the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

Claims 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kenny et al. US Patent Application 20040036595 in view of Roesner et al. US Patent 5583819.

Regarding claim 33, Kenny et al. teaches sending power for a time interval to a tag at first frequency in the low frequency range (paragraph 0018) and transmitting a second signal at second frequency in the high frequency range when a response is not received from the tag after the transmission of the low frequency signal (paragraph 0033). The transmitted signal to the tag contains energy (paragraph 0019) and a first and second power ( $P_j$  and  $P_{j+1}$ ) is inherently associated with the first and second signal respectively. The LF signal is transmitted before the HF signal and is therefore transmitted at different time interval because they are not transmitted at the same time. Kenny et al. also teaches varying the range of the LF carrier signal by adjusting the power and frequency of the LF carrier signal used to identify objects in a particular zone and teaches the range of the LF signal is greater than 30kHz and less than 15MHz (paragraph 021). Kenny et al. teaches varying the range of the interrogating signal by varying the power of the interrogating signal (paragraph 021) and reducing the range automatically reduce the number of tags responding to the interrogating signal. Kenny is silent on teaching the time between

transmitting the different power signal is less than the time taken for the tag to lose its power. Roesner et al. in an analogous art teaches turning off the signal transmitted to the tag without causing the tag to lose power (col. 13 lines 44-49) further suggesting that the time between transmitting the different power signal is less than the time taken for the tag to lose its power.

It would have been obvious to one of ordinary skill in the art to modify the system of Kenny as disclosed by Roesner because when the time between transmitting the different power signal is less than the time taken for the tag to lose its power, the powering of the tag is ensured.

Regarding claim 34, Kenny et al. teaches varying the range of the LF carrier signal by adjusting the power and frequency of the LF carrier signal used to identify objects in a particular zone and teaches the range of the LF signal is greater than 30kHz and less than 15MHz (paragraph 021). Kenny therefore teaches the first and second frequencies are in the same frequency band because only LF carrier signal is used to identify objects in zone 1.

### *Conclusion*

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vernal U. Brown whose telephone number is 571-272-3060. The examiner can normally be reached on 8:30-7:00 Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Zimmerman can be reached on 571-272-3059. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

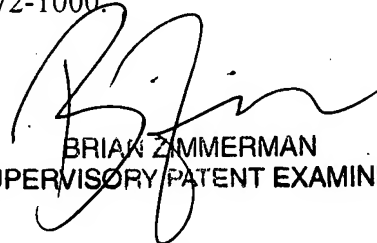
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Vernal Brown  
January 15, 2008



BRIAN ZIMMERMAN  
SUPERVISORY PATENT EXAMINER